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ABSTRACT

In the "Learning and Teaching" course at the University of Waikato (New Zealand) College of Teacher Education, explorations are being conducted into the advantages of training student teachers to work, on a more genuinely collegial basis, with the college's cooperating teachers. The assumptions and objectives of the course focus on teaching as a directed, flexible activity which involves understanding and sensitive control of pedagogical methods, and attitudes and skills for self evaluation. A variety of teaching and learning situations are examined, culminating in the presentation of a model which forms the basis of the course and encourages students to develop sensitive control of teaching repertoire. The orientation of the model is that student teachers should regard themselves as teachers who are learning, rather than as learners who are practicing teaching. Two interrelated units in the Learning and Teaching course introduce the concept of nonjudgmental supervision and prepare students for the student teaching experience. In "Looking at Teachers" and "Looking into Teaching," students: (1) analyze and discuss teaching activities in various contexts; (2) learn the value of interaction analysis procedures using a teacher-pupil interaction coding system; and (3) apply resulting supervisory skills. In spite of generally positive program evaluation by students, progress of the Learning and Teaching course has been hindered by restrictions of the college course structure and students' other course requirements. (FG)

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TEACHING PRACTICE : THE STUDENT TEACHER AS SUPERVISOR

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Despite the current enthusiasm for clinical supervision as an innovative procedure in teacher education, many supervision models retain the traditional superordinate and subordinate roles for supervisor and teacher trainee respectively. In the Learning and Teaching course at the Waikato College of Teacher Education, however, explorations are being made into the professional advantages for student teachers of having them work on a more genuinely colleaguial basis with the college's cooperating teachers. Although still a nascent development, and by no means occupying as yet a central place in the student teaching experience, this colleaguial activity means that student teachers are sometimes clinically supervised but that they also help their cooperating teachers and fellow trainees in self-analysis and self-evaluation work.

The present paper has two main purposes. First, it provides an overview of the Waikato course on Learning and Teaching. Second, it describes in some detail how student teachers in this course are taught the non-judgmental role which characterises their supervisory activity. In the latter regard, discussion focuses first on the rationale for the non-judgmental stance in supervision. It then centres on the learning experiences in one of the major study themes in the Learning and Teaching course, namely, *Looking into Teaching*. This theme deals with teaching in the small group discussion situation. On the basis of learning experiences here in interaction analysis, self-evaluation and clinical supervision, student teachers are in a position to act as supervisors for other students and cooperating teachers during subsequent student teaching in schools.

THE LEARNING AND TEACHING COURSE

The Waikato College of Teacher Education in Hamilton, New Zealand, has attempted to overcome the so-called 'theory versus practice' problem in two main ways. First, an increasing amount of the allocated time in education and curriculum courses is given over to school-based activities. Second, an attempt has been made to coordinate all professional studies. Thus education theory courses are meant to help students build up a set of principles that are basic to the planning-teaching-evaluation process; and these principles are supposed to be demonstrated, elaborated and personally 'tried out' in the ongoing programme in curriculum studies.

As revealed by several formal evaluations, the attempt at Waikato to coordinate all professional studies has not been a success. Basic teaching principles have not been clearly identified or agreed to; there is unnecessary overlap and repetition of subject matter across courses; and students often receive conflicting guidance as to which teaching behaviours they should try to develop. In addition, students still tend to model uncritically the practices of their supervising teachers in the College's cooperating schools, and develop only a global appreciation of a fairly narrow range of teaching modes and skills.

Some Waikato staff now believe that the difficulties just described might well be overcome by assigning a pivotal role within the college professional programme as a whole to the second-year course in Learning and Teaching. A primary concern of this course is how to handle the teacher effectiveness problem given that, at the present time, we have neither a comprehensive theory of teaching nor a set of generally accepted criteria for judging teaching competence.

The Learning and Teaching course is based on two interrelated premises. The first premise is that, before they begin a systematic study of particular teaching modes, students must be helped to examine: (a) their own and others' beliefs about the nature and relationship of teaching and learning; (b) what research can and cannot tell us about effective teaching; and (c) ways of analysing the teaching process. The second premise is that the beliefs about teaching and learning which are examined must include those of the course teachers. This is not an attempt to propound 'the correct view', but rather to ensure that students know why they are being confronted with certain subject matter and learning activities during the course.

Our own beliefs about learning and teaching come from our attempts to make sense of the findings from three decades of research on teaching, as well as from our personal experiences as classroom teachers and researchers. Thus, for example, to account for the inconclusiveness of research on causal links between teacher behaviour and pupil achievement, we have had to reappraise some of our basic assumptions about teaching and teaching effectivenss. This, in turn, has led us to modify the objectives and programme that we consider appropriate to a

course which attempts to help teachers become more effective. Such reappraisal is necessarily on-going as we take into account the emerging findings of studies into previously unresearched or little-researched aspects of teaching (e.g. contextual factors, non-verbal interaction, aptitude-treatment interaction, teachers' implicit theories, teacher thinking and planning). The discussion below provides an overview of the assumptions, objectives, and programme for the course.

ASSUMPTIONS:

1. *We believe that teaching involves taking account of, trying to influence, and arranging conditions with the intention of helping someone learn.*

Several features of this position should be noted. First, teaching is viewed as a thoughtful activity : it is behaviour associated with the thought in mind (the intention) that learning might be facilitated in someone if conditions are arranged in a certain way. Second, teaching is seen as involving activities that are sometimes open to view and sometimes hidden. Third, the relationship between teaching and learning is regarded as a 'probabilistic' one since many of the conditions that may help or hinder learning are difficult, if not impossible, to directly arrange. In such circumstances, teachers can only take the conditions into account, or try to influence the situation as best they can. This leads to the second assumption associated with the course:

2. *We believe that effective teachers are those: (a) who sensitively and flexibly control the learning conditions that can be arranged, including a wide repertoire of teaching modes and skills; (b) who take account of the learning conditions that cannot be arranged; and (c) who recognise that teaching effectiveness will depend, in part, on their preparedness to experiment with, analyse and evaluate their own patterns of thought and action.*

OBJECTIVES:

In keeping with the assumptions above, the Learning and Teaching course aims at helping students work towards three main goals:

1. *Knowledge and understanding of the views that they and others have about the nature of learning and teaching, and of teaching effectiveness.*
2. *Sensitive control of a widening repertoire of teaching modes and their associated skills.*
3. *Attitudes and skills that will encourage and assist them to take responsibility for the evaluation of their own teaching.*

THE PROGRAMME:

Student teachers begin their Learning and Teaching course by observing and reflecting on a variety of school and community situations in which learning appears to be going on. As a result of this activity they are alerted to features of both the *Process and Products of Human Learning* (learning modes and types), as well as to the conditions that may have helped or hindered learning on these occasions. We next look more closely at a selection of *Learning Conditions* (e.g. attention and motivation, cognitive readiness and information processing, learning style), endeavouring as we do this, to make a strong case for teachers becoming well informed about these conditions and their possible effects.

Attention then shifts to teachers and teaching. Under the theme of *Looking at Teachers*, the following topics are considered: the things that people think about and do when teaching and learning, as opposed to some other activity; the relationship between teaching and learning; conditions that teachers may take account of, or attempt to influence, or arrange; factors that might account for similarities and differences in the way teachers teach; and factors that may help or hinder teachers' attempts to be effective. This section culminates in an examination of past and present efforts to define the qualities of the effective teacher. The inconclusive picture here leads to the presentation of what has become known as the 'SCR' Model which aims at helping students help themselves to develop Sensitive Control of Teaching Repertoire (Katterns, 1977: pp.25-26; p.218).

The 'SCR' approach encourages students 'to become their own researchers'. Thus the next theme in the course on *Looking into Teaching* introduces students to interaction analysis techniques, self-evaluation procedures, and practice in assuming the role of a non-judgmental supervisor for other students. These activities are carried out with

reference to the discussion approach to teaching. They lead, subsequently, to a teaching and clinical supervision project during a teaching practice period in schools.

Upon the foundations described above, students then study and explore various ways of handling the *Major Teaching Modes* that are available to classroom practitioners. Although these teaching approaches are considered in relation to a variety of curriculum areas, special reference is made to students' concurrent coursework in the teaching of Mathematics and Language Arts.

THE STUDENT TEACHER AS SUPERVISOR

RATIONALE:

Typically, teaching involves an attempt to implement a planned overall strategy related to one or a combination of teaching modes (e.g. guided discovery, open discussion and exposition to mention but a few). This overall strategy is made up of a sequence of tactics or sub-strategies, each of which comprises a group of interrelated teaching skills. Interactive teaching, however, does not consist of just 'slotting in' planned tactical sequences in a linear, lock-step fashion. In accordance with a teacher's observation and interpretation of changing conditions in the teaching-learning environment, new patterns of teaching behaviour will often be introduced as alternative possible paths to teaching goals, and a teacher will sometimes need to alter both these goals and the overall strategy. Of course, even when such flexible or responsive teaching occurs, there is no guarantee that a teacher has been able to control all of the conditions of learning for all pupils.

Clearly, then, teaching is an extremely complex activity involving continual professional decision-making on the teacher's part and continuous interaction of teacher, pupil, task and contextual variables. Indeed, educational research is only just beginning to reveal the extent of this complexity as qualitatively oriented studies supplement quantitative research.

Several propositions about teaching can thus be made. The first proposition is that, in the absence of clear-cut evidence from research

on the most effective ways to teach, teaching skill is best conceived as the ability to create a variety of learning environments using teaching strategies that are appropriate for particular kinds of learning outcomes. This is akin to the pluralistic view of effective teaching proposed by Joyce (1975) and Hyman (1976).

A second proposition arising out of the first is that a teaching strategy may consist of one or a combination of teaching modes, and usually evolves during interactive teaching as a series of planned and/or responsive tactics.

A third proposition is that the teaching-learning process has a holistic, organic property stemming from the highly integrative nature of interaction amongst teacher, pupil, task and contextual variables. As such, no hierarchy of importance in terms of effectiveness can be assumed for particular teaching skills; any teaching skill can be appropriate, on occasion, depending upon the function and teaching objective it is intended to serve within the framework of a tactical sequence. Moreover, the contribution of a given class of skills to pupil achievement does not come from the use of these skills *per se*, but more likely from their interrelationships with all other skills and variables in the context of the total teaching act (c.f. Joyce, n.d.: pp.3-4).

A fourth proposition is that, given the complexity of any teaching situation, effective teachers: (a) arrange those conditions of learning that seem to be manageable; (b) attempt to arrange other less controllable conditions; and (c) at least take account of conditions which are beyond their control, but which might well be influencing pupil learning.

On the basis of these propositions it can be argued that competent teachers are those who have Sensitive Control of Teaching Reportoire. They:

1. *are able to draw upon knowledge of a wide REPERTOIRE of teaching modes and their associated skills in order to plan and implement a variety of learning environments that are appropriate for differing kinds of learning outcomes;*

2. *are able to flexibly CONTROL a reportoire of strategies and tactical skills in the sense that, either as originally planned or responsive moves, they are suitably matched to intentions regarding pupil behaviour and learning; and*

3. *are SENSITIVE to cues in the teaching-learning situation which signal that it is appropriate either to sustain or to modify planned teaching goals and patterns of behaviour.*

(Katterns, 1977: p.25)

Thus competent teachers are informed and flexible decision-makers. They may be conceived as being somewhat like the professional golfer who not only commands a wide repertoire of games strategies and clubs, but chooses appropriate tactics (particular clubs and particular shots with those clubs) according to a keen perception of conditions in the golfing environment. It must be recognised, of course, that handling a behavioural repertoire is a much simpler matter in golfing than is the case with teaching. Despite what frustrated golfers might say, there is a vast difference between controlling one's behaviour in relation to an inanimate and standardised ball, and in exercising the sensitive control which is required to guide psychologically diverse, overchanging, and often unpredictable pupils in certain educational directions (Katterns,1977: p.26).

These propositions and analyses above suggest that teaching experience for student teachers should go beyond the practice of skills along lines modelled for them by a master teacher. Student teachers need to explore and evaluate for themselves the appropriateness of alternative patterns in overall teaching strategy and tactics in a variety of teaching modes. This kind of experience reflects the behaviour of competent teachers who, it can be argued, conduct this exploratory and adaptive process almost intuitively as their teaching proceeds.

The concern, in other words, should not be with imitative practice of the 'right' ways to teach, since there is no strong evidence from research that might justify such a position. Just as teaching is a process of learning and inquiry about the conditiors of learning and oneself as a facilitator of learning, so too the basic values underlying student teaching behaviour should be those of student inquiry into their own teaching behaviour and self-directed change (c.f. Flanders, 1970; Morine, 1974; Flanders, 1976). Stenhouse has summarised this position in his notion of teachers as their own researchers (Stenhouse, 1975). In

McClosky's (1971) terms, what we at Waikato are seeking is the idea of student teachers who regard themselves as teachers who are learning, rather than as learners who are practising teaching.

This orientation has led at Waikato to the development of a sensitisation model of microteaching (Katterns, 1977), to the Learning and Teaching course for second-year students being constituted as it is at present, and to some pilot work in the student teaching experience along self-inquiry lines. In microteaching, the objective is to sensitise students to the potential repertoire of teaching behaviours in each major teaching mode, and to have students explore alternative ways of handling these behaviours as strategic skill sequences. Thus Waikato micro-teaching does not follow the skill-by-skill training of the classical Stanford model which is based on a particularistic analysis of the teaching act.

The two main assumptions underlying the Learning and Teaching course have been outlined earlier and are also a direct outcome of the propositions mentioned above. Besides the Sensitive Control of Repertoire Model, students are given three further guidelines when considering the problem of teacher effectiveness. The first of these is that they should recognise that teachers are not able to control all of the conditions of learning, but that they should try to influence conditions wherever they can. Second, students learn that no matter what the teaching mode used, competent teachers give due consideration to four crucial learning conditions: learner attention and motivation; teaching so that learner retention and/or understanding are facilitated; engendering a feeling of success in learning; and encouraging the use of new learning by means of transfer activities. The third guideline for students to think about is that, no matter what empirical research says (or is unable to say) about effective teaching, a teacher's *beliefs* about the nature of *educative teaching* are often likely to determine how teaching will be done. In other words, teachers' philosophical stances on such problems as the nature of human nature, the purpose of education, and the needs of society are often built into their teaching styles ... whether or not these standpoints can be made verbally explicit, and whether or not they are consistently applied.

The self-learning orientation at Waikato calls for a different supervisory style from that which occurs in many microteaching and student

teaching programmes. The task of the supervising teacher or college lecturer is not to model, judge and positively reinforce teaching performance according to what *they* believe effective teaching *should* be (training students?). Instead, the role suggested for clinical supervisors is a non-directive or facilitative one which encourages student teachers in the self-inquiry, self-analysis and self-evaluation process. In other words, the valuing process in teaching, as well as the decisions to change teaching style, or to explore certain alternative approaches, are to be put largely in the hands of the individual student teacher.

The writer's experience in microteaching has shown that this self-inquiry process is more fruitful when interaction analysis data is made available to a teacher. When teachers gather such data for fellow teachers and then draw attention to data patterns in a non-judgmental way, this stimulates self-analysis and affects the professional self-concept in positive ways (Katterns,1977; Imlach,1978). An informal study at Waikato (Hill, 1978) has also suggested that when student teachers and their supervising teachers gather interaction analysis on each other's teaching and share it along non-evaluative lines, there are professional growth benefits for both parties that outweigh those that accrue from the more conventional pattern of the student teacher doing 'crit. lessons' for the supervising teacher. It seems, therefore, that there is a place in the teaching experience in cooperating schools for student teachers sometimes taking the role of'supervisor', working on a genuine colleaguial basis with their assigned teachers.

Clearly, the latter standpoint will not be acceptable to all supervisory personnel. Yet for it to be successfully implemented, it requires the support of college staff and supervising teachers in the college's cooperating schools. The next section of this paper describes in detail how the Waikato course in Learning and Teaching attempts to set students up with the professional attitudes outlined in the present section, and gives them some opportunity to put clinical supervision into action along the lines implied by the Sensitive Control of Repertoire view of effective teaching. The final section of the paper traces what are seem to be strengths of the approach to date, the main limitations, and what some future developments might be.

LEARNING THE SUPERVISORY ROLE:

As indicated earlier, the idea of non-judgmental supervision is introduced to Waikato Students by means of two interrelated units in their second-year course in Learning and Teaching : *Looking at Teachers* and *Looking into Teaching*.

Looking at Teachers:

A major goal of the unit *Looking at Teachers* is to validate the 'SCR' Model and the concomitant need, therefore, to adopt a non-judgmental stance in supervisory work. To this end, students first participate in a series of planning-for-teaching exercises, discussion on which culminates with the presentation of a general model of the teaching-learning situation. This model highlights how internal and external conditions may interact to help or hinder learning, and draws attention to the problem of how much control or influence teachers can actually have over these conditions. Teaching is thus seen to involve arranging those conditions of learning that can be readily arranged, attempting to influence other less readily accessible conditions, and taking account of those conditions which appear to be beyond teacher control.

This view of teaching is then examined in the light of further lesson planning activity, the analysis of videotaped samples of teaching, and the research findings that have only just begun to emerge on teacher thinking during the planning and interactive phases of teaching. Study themes here include: (a) the value of teacher planning; (b) factors which influence individual differences among teachers in their lesson planning (e.g. tolerance for uncertainty; commitment to particular teaching theory; learner characteristics; availability of established routines; attitude to planning; subject matter knowledge; teaching repertoire; external constraints related to resources, time, curriculum requirements, and school organisation); (c) the automatic nature of much of teaching; and (d) responsive teaching (e.g. monitoring the teaching plan in action; 'reading' the cues to learners' learning; and the degree to which responsive or adaptive teaching is really possible).

These studies give rise to two important principles. First, different observer-judges examining the same teaching performance may well judge different aspects and draw different conclusions because of such influences as selective attention, current personal concerns and particular value positions about teaching theory and method. Second, judgements about teaching performance which are based merely on observable 'surface' behaviour and guesses about teacher intentions and learning thoughts are likely to be 'risky' analyses ... there is a need to find out about the thoughts accompanying observed behaviour from the teacher and the learners themselves.

But the question remains: Is it possible to make valid judgements as to whether or not a given teaching performance is effective? The general problem of 'what makes the good teacher' is thus introduced to students and the research literature reviewed. In the absence of clear-cut direction from this research, the guidelines discussed in the previous section are presented for student consideration: the 'SCR' Model and the notion of teachers as inquirers and researchers concerning their classroom behaviour; the need for planning and teaching to keep in mind the four interrelated learner factors of attention and motivation, remembering and understanding, success feelings and the use of learning; and the relationship between the concepts of *teaching* and *educative teaching*.

Looking into Teaching:

The stage is now set for the unit *Looking into Teaching* which is scheduled over three weeks immediately preceding a student teaching experience in schools. The main objective of this unit is to help students make use of the orientations above with reference to their own teaching and the clinical supervision process. Students learn how the neutral supervisory role can encourage teachers to self-evaluate their teaching plans and performances, as well as to experiment with and widen their teaching repertoire. And, in gathering and feeding interaction analysis data back to teachers in a non-judgmental way, students also tend to become more sensitised about their *own* planning and teaching behaviour.

The unit proceeds in three main phases. Phases 1 and 2 provide knowledge, understanding and skill in interaction analysis techniques

related to the small group discussion lesson. This is the platform for learning the non-judgmental feedback and supervision role which is the primary concern of Phase 3.

PHASE 1:

(1) The purpose of the opening session is to establish the value of interaction analysis procedures for describing teaching. Initially, students view a videotaped sample of teaching and make 'gestimates' about the relative weightings for various facets of teacher and pupil verbal behaviour (e.g. What percent of the total verbal contributions were cases of the pupils asking questions?).

(2) This 'gestimate' data is then temporarily left aside and attention shifts to the relative merits of using unstructured observation, rating scales and category systems for describing and analysing the teaching process. Several exercises highlight the subjective and impressionistic nature of unstructured observation, and illuminate the strengths of the more objective description that category systems make available.

(3) With the value of objective description established, introductory experiences are provided with a selected range of interaction analysis systems. These systems relate specifically to the teacher-led small group discussion lesson, and have been designed by the present writer (Katterns, 1974) to meet the following criteria:

1. *Quick and easy to learn.*
2. *Readily usable with in vivo teaching, as well as with audiotapes and videotapes of teaching sessions.*
3. *Provide graphic information that can be gathered quickly for immediate feedback to a teacher.*
4. *Economic in that no special technology or specially designed coding forms are required.*
5. *Do not embody (either explicitly or implicitly) any commitment to a particular value position about effective teaching.*

(4) Actual interaction analysis activity begins for students with the presentation of several simple techniques for 'tracking' pupil participation (see FIGURE 1). Some short role-playing scenarios bring these analysis

systems to life, provide the minimal practice that is required, and stimulate discussion on the strengths and limitations of the data picture gained.

(5) With a 'feeling' for interaction analysis established, a series of progressions then leads students towards some initial competence with KIACS (Katterns Interaction Analysis Coding System) which is the main procedure used by students for the analysis of teacher-pupil interaction (Katterns, 1974). The basic units of analysis in this system are the discussion episode and the verbal move (c.f. Bellack *et al*, 1966; and Nuthall and Church, 1973). Verbal moves are regarded as serving an interpersonal control and/or meaning function, and are recorded sequentially on a flow-grid somewhat along the lines recommended by Flanders (1970). This discussion flow is divided into episodes, an episode being defined as all the teacher and pupil verbal moves which relate to one sub-topic within an overall discussion theme.

As shown in FIGURE 2, student teachers' first exposure to KIACS is with reference to only ten verbal categories on a simple 3-level grid. The learning sequence in FIGURE 2 helps students establish: (a) the concepts of the episode and verbal move; (b) the main kinds of teacher and pupil verbal moves within episodes; and (c) the notion of sequential patterns within and across discussion episodes.

The upper line on the coding grid is reserved for recording a teacher's Structuring and Starter Question moves (S and Q) which initiate discussion episodes. Structuring moves provide substantive and/or procedural information which sets the stage for Starter Questions. These questions, of course, can make different levels of cognitive or affective demand upon pupils (e.g. closed or open questions, to give but one simple classification), but at this stage no attempt is made to differentiate such levels.

The middle line of the grid codes and records all pupil responses: Answers (A); Initiations (I), including the initiation of episodes; Questions asked (Q); and Yes/No type answers, laughter, chorusing, confusion or nil-response situations (coded with the catch-all symbol of ?).

The grid's bottom line shows the teacher's cognitively oriented reaction moves which help to sustain discussion within an episode: follow-up questions (F); structuring moves which accompany follow-up questions (S); comments which add information to pupil ideas (C); and answers to pupil questions (A). The differentiation of teacher follow-up questions according to their purpose and cognitive demand is left until a later stage in the interaction analysis learning sequence.

Once connecting lines are drawn between codings on the grid, it is possible to discuss the nature and likely purposes of various types of sequential discussion patterns (see FIGURE 2). For example, 'slash' patterns, the result of quick one starter-question/one pupil response episodes, may indicate teacher 'build-up' for a later episode that is to be initiated with a thinking-type question. Again, regular 'zig-zag' patterns within episodes (sequences of pupil answer/teacher follow-up question) suggest a fair measure of teacher control of a discussion - which might or might not be intentional. By way of contrast, 'table-top' patterns are created when a teacher stays out of the dialogue for a time, thus bringing about a string of pupil answers and/or initiations (and perhaps some questions) along the middle line of the coding grid.

(6) The final step in this introduction to interaction analysis is to return to the 'gestimate' data collected at the beginning of the session. First, students are shown an interaction analysis of the discussion lesson to which their 'gestimates' refer (see FIGURE 3). This provides an opportunity to extend the 3-level grid to include a fourth level for the coding of a teacher's evaluative reactions to pupil responses (+ = verbal praise; - = verbal punishment; ✓ = acceptance and acknowledgement; ✗ = correction of pupil response). In addition, this somewhat more sophisticated interaction analysis allows the introduction of several coding features which enable one to better capture the dynamics of a discussion session (e.g. circling of Code Q to indicate a repeated question; linking interrupted but continuing responses by means of loop-over lines.

Next, 'gestimates' on the originally posed questions are gathered from ten randomly selected students and their responses displayed alongside the data derived from the application of KIACS. The usual picture here for most of the questions involved is one of wide variability for student responses, as well as between these responses and the KIACS data.

PHASE 2:

(1) These data-contrasts referred to above tend to speak for themselves so that student motivation is typically high for gaining greater precision with KIACS coding in a subsequent laboratory. In addition to coding of role-play sessions and videotaped lessons, this laboratory deals with alternatives for questioning strategies, thus stressing the idea of repertoire - building.

(2) The next session gives attention to different types of Starter and Follow-up Questions, reviews the main findings of the research literature on classroom questioning, and examines some of the myths about teacher questioning skills. The final activity in the laboratory reviews the potential question-asking and reacting repertoire that is available to teachers for any given discussion lesson episode, and introduces role-playing to help students begin to get control of this set of teaching behaviours (see FIGURE 4).

In this laboratory cognitive Starter Questions are sub-classified as closed or open (coded C or O), or as memory, convergent, divergent and evaluative (coded M, C, D, E); affective Starter Questions are sub-classified as closed or open (coded C or O). Extended coding categories are also used for Follow-up Questions: (a) R for the re-direction of questions; (b) P for probing questions; and (c) U for teacher questions or statements that clearly make use of the ideas of one or more pupils. In the case of probing questions, five further classifications are made which students learn to code and record on a separate grid: questions which prompt a pupil response, or those which ask pupils to amplify, clarify, justify and refocus a response.

PHASE 3:

(1) The focus of this phase is on learning the supervisory role. It means that interaction analysis, as well as planning considerations of the unit *Looking at Teachers*, now taken on real purpose.

The rationale for non-judgmental supervision is reviewed, and the process demonstrated for students by means of a videotape of a local teacher being supervised by four other staff members in her teaching

syndicate. After following this teacher through the planning and interactive phases of a discussion lesson, students test their understanding of the concept of non-directive supervision by attempting to spot instances in the videotape where syndicate members lapse into value-judgements. Such instances, and the teacher's reactions to them, illustrate how evaluatively oriented comments ... whether negative or positive ... tend to cause closure of self-analysis activity. Guidenotes are then issued on ways of using interaction analysis data to formulate non-judgmental statements or questions which are likely to stimulate teachers in the direction of self-evaluation.

(2) This feedback activity becomes part of an overall clinical supervision sequence which is essentially like that recommended by Goldhammer (1969). The sequence has been used by the writer in research on microteaching (Katterns, 1977) and has been re-advocated more recently by Goldhammer, Anderson and Krajewski (1980), and Acheson and Gall (1980). In brief, the 5-step sequence consists of: (a) a Pre-observation Conference between teacher and observer(s) to share pre-lesson planning and decide upon feedback focii; (b) the session for Observation and Interaction Analysis of the teaching; (c) an Analysis and Strategy session for the observer(s) in readiness for supervision; (d) the Supervisory Conference in which non-judgemental feedback helps the teacher to compare planning and teaching actualities, to analyse within-in lesson thoughts and actions, to self-evaluate, and to suggest alternatives to try; and (e) the Post-Conference Analysis in which the teacher and the observer(s) share impressions on the potency of the feedback session.

(3) Application work with the clinical supervision sequence then follows. Time and logistic problems prevent all second-year students from going through a microteaching and clinical supervision cycle. Thus we have to make do with class members in each teaching group of twenty acting as supervisors for several fellow students who plan and teach 10-15 minute microlessons with children. Sub-groups take responsibility for collecting a variety of interaction analysis data from the videotapes made of these lessons after which, for each teacher in turn, sub-group members assume the roles of neutral 'feedbackers'. FIGURE 5 presents the kinds of data collected for feedback purposes.

(4) The unit of *Looking into Teaching* concludes with briefing for

a field task in clinical supervision during the student teaching experience in schools which follows. This task involves supervision of the teacher to whom a student is assigned by a fellow student working in the same school. Each student is required to present a field report which includes:

(a) *The colleague's lesson plan and an audio-cassette of the supervised 10-15 minute session.*

(b) *All interaction analysis data collected.*

(c) *A lesson analysis statement: initial impressions about the relationship between the lesson plan and teaching actualities, as well as the plan for conducting the feedback session.*

(d) *A report on the feedback session, including a summary of teacher reactions to data presentations and a personal evaluation of the feedback session.*

(e) *A concluding statement on the value of interaction analysis, changes that the student would like to make in future 'feedbacking', and recommendations on ways of improving the interaction analysis system used.*

CONCLUSION

Within the bounds of teacher questioning skills in the small group discussion lesson, effort at Waikato to action the concept of the student teacher as supervisor has been fairly successful. In general, students report: (a) positive reaction to learning about the state of the art for research on teacher effectiveness; (b) openness to the 'SCR' Model and the idea of teachers 'as their own researchers' as viable ways of looking at the planning and teacher effectiveness problems; and (c) greater awareness and insight about questioning strategies and skills.

It is disappointing, however, that during school practice only a small number of students manage to extend their colleagual activity with cooperating teachers to a wider range of curriculum areas. A significant factor here is the competing pressure that comes from the large number of teaching practice requirements that are set for students by other departments and course lecturers. Notwithstanding these realities, most student teacher write-ups on the colleaguial field task indicate a reasonable grasp of the non-judgemental supervisory role, and speak of learning benefits for both the student teacher and cooperating teacher as a result of mutual observation, interaction analysis and feedback activity. Above all, informal conversation with student teachers reveals their feelings

that they are being a real teacher learning, and much less someone who is learning someone else's teaching.

Nevertheless, we feel that we could do a much better job with our students if we could overcome the restrictions that are presently placed upon us with regard to college course structure, and the nature of the student teaching experience in relation to college coursework. Student evaluations indicate that, because they realise the complexity of the teaching process, they want to 'dig deeper' into it. They express a wish for more analysis of samples of teacher planning and interactive teaching; more consideration of various teachers' theories about teaching; more practice in planning and microteaching for *all* students; more time to practice interaction analysis; and more experiences in assuming the 'neutral feedbacker' role to help other teachers self-analyse and self-evaluate their teaching.

But 'more', of course, does not necessarily mean 'better', and 'more' is not necessarily best accommodated within the framework of the Learning and Teaching course alone. In a real sense, we are still facing the problem of coordination for all professional courses that was referred to in the beginning of this paper. What we have now, however, are some new models to work with about teaching and learning, teacher effectiveness, and the supervision of teaching.

Currently the preservice programme at Waikato is under review. Opportunity exists, therefore, for dialogue with all college departments concerning these newer models, as well as the foundational potential of the Learning and Teaching course for student teachers' learning experiences in concurrent and subsequent courses in curriculum. Staff support for these ideas could not only lead to better coordination and more economic use of time for education and curriculum studies, but also to more agreement than at present on the nature of effective teaching and supervision. Should staff consensus not eventuate, we must at least work for more openness of attitude among staff about the teaching effectiveness problem. Indeed, an open learning environment which asks students to consider alternative beliefs about learning and teaching, and which does not demand that they adopt the position taken by external authority figures, is the healthiest environment of all for truly educative learning.

We cannot, of course, leave out of this work the teachers in the college's cooperating schools. They need to see the 'chalk-face', not as the place where they put students on the 'right track', but as a place where college staff, student teachers and cooperating teachers come together to work on shared teaching problems in a genuine collegaual way. We need to explore many avenues for bringing about this team picture. The concept of the student teacher as supervisor is but one example in this direction.

REFERENCES

ACHESON, K.A. and Gall, M.D. (1980). *Techniques in the Clinical Supervision of Teachers.* New York: Longman.

BELLACK, A.A., KLIEBARD, H.M., HYMAN, R.T. and SMITH, F.L. (1966). *The Language of the Classroom.* Teachers College Press.

FLANDERS, N.A. (1970). *Analyzing Teaching Behavior,* Addison-Wesley.

FLANDERS, N.A. (1976). Research on Teaching and Improving Teacher Education. *British Journal of Teacher Education,* 2, 2, 167-174.

GOLDHAMMER, R. (1969). *Clinical Supervision: Special Methods for the Supervision of Teachers.* New York: Holt, Rinehart and Winston.

GOLDHAMMER, R., ANDERSON, R.H. and KRAJEWSKI, R.J. (1980). *Clinical Supervision: Special Methods for the Supervision of Teachers, 2nd edit.* New York: Holt, Rinehart and Winston.

HILL, D. (1978). *Report on Pilot Study of Colleaguial Supervision in Schools.* Teacher Education Research Project, University of Waikato, Hamilton, New Zealand (Unpublished).

HYMAN, R.T. (1976). Teaching Strategies for Pluralistic Teaching. In *Issues in Secondary Education, 75th Yearbook of the National Society for the Study of Education, Part 2.* University of Chicago Press.

IMLACH, R. (1978). Microteaching. *National Education,* May.

JOYCE, B.R. (N.D.). Listening to Different Drummers: The Effects of Teaching on Learners. Booksend Laboratories production.

JOYCE, B.R. (1975). Conceptions of Man and their Implications for Teacher Education. In *Teacher Education: 74th Yearbook of the National Society for the Study of Education, Part 2.* University of Chicago Press.

KATTERNS, R.W. (1974). *Manual: the SQUAIES Interaction Analysis Coding System* (re-named KIACS - Katterns Interaction Analysis Coding System). Teacher Education Research Project, University of Waikato, Hamilton, New Zealand (Unpublished).

KATTERNS, R.W. (1977). The Relative Effectiveness of Different Forms of Microteaching Incorporating a Sensitisation Approach. Unpublished Doctoral Dissertation, University of Waikato, Hamilton, New Zealand.

McCLOSKY, M.G. (ed) (1971). *Teaching Strategies and Classroom Realities.* Prentice-Hall.

MORINE, G. (1974). Interaction Analysis and Inquiry: Teaching Skills Seen Through a Double Screen. *Classroom Interaction Newsletter,* 10, 1, 13-24.

NUTHALL, G. and CHURCH, j. (1973). Experimental Studies of Teaching Behaviour. In Chanan, G. (ed), *Towards a Science of Teaching.* London: National Foundation for Educational Research.

STENHOUSE, L. (1975). *An Introduction to Curriculum Research and Development.* London: Heinemann.

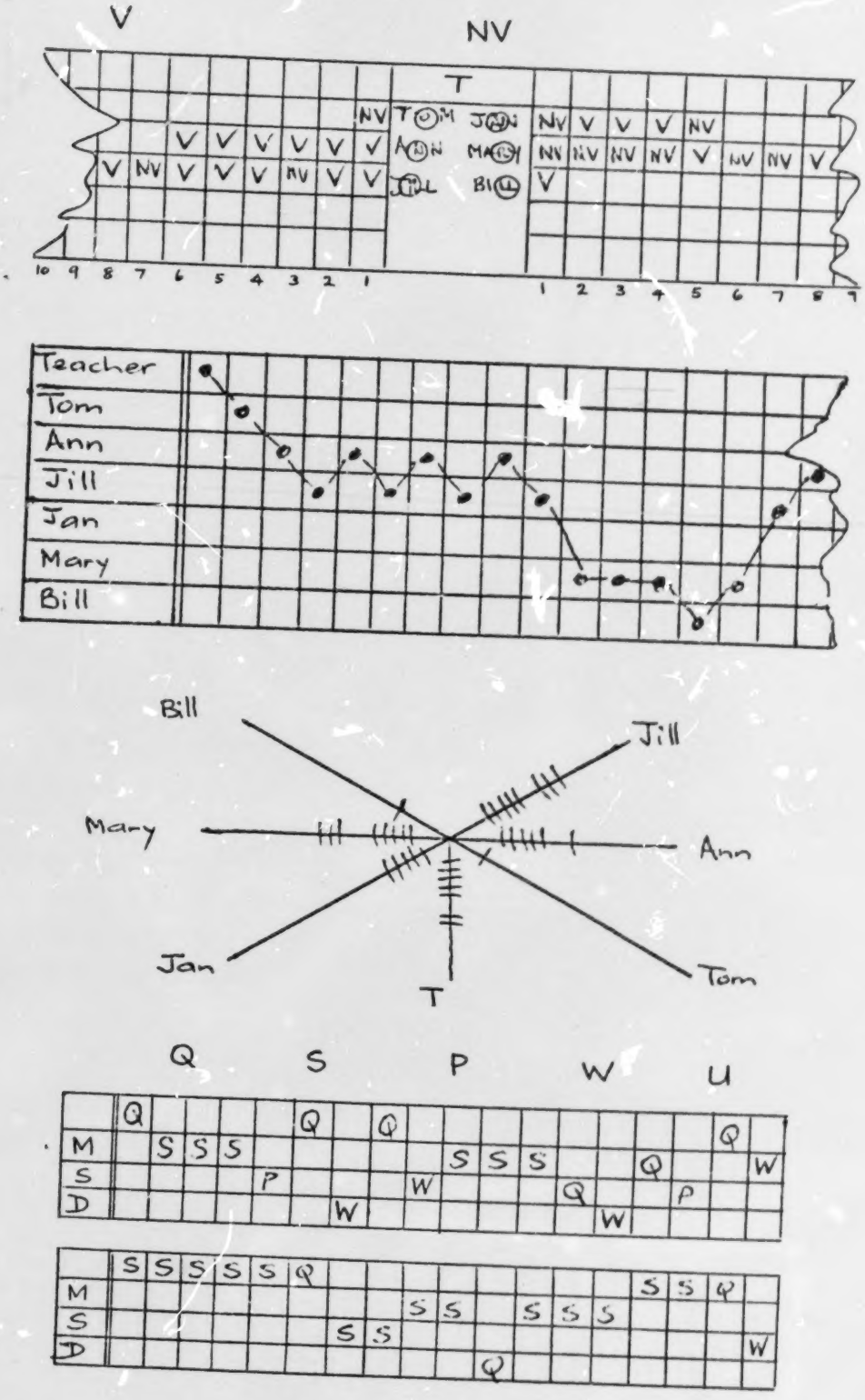


FIGURE 1. Tracking verbal participation of discussion group members

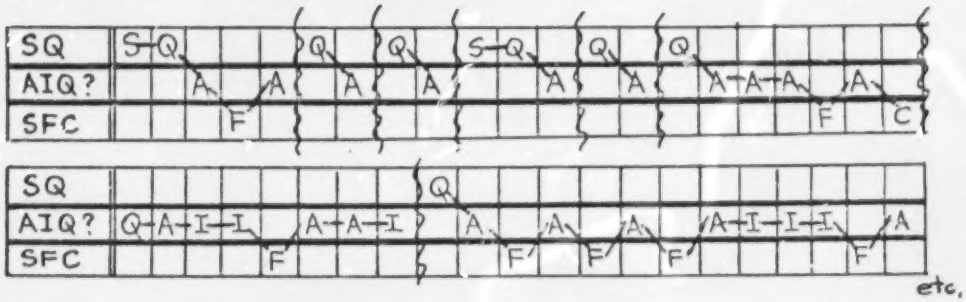
What's happening here?

TPTPTPTP	TP	TP	TP	TPPPT	PPPTPTPTPPPTP

Same teacher, same pupils - what's happening now?

QAFAFAFA	QA	QA	QA	QAIIC	IIIFAFACIIIFA

Can we sort out any patterns?



Patterns:

Which pattern is the most effective?

Let's try it out:

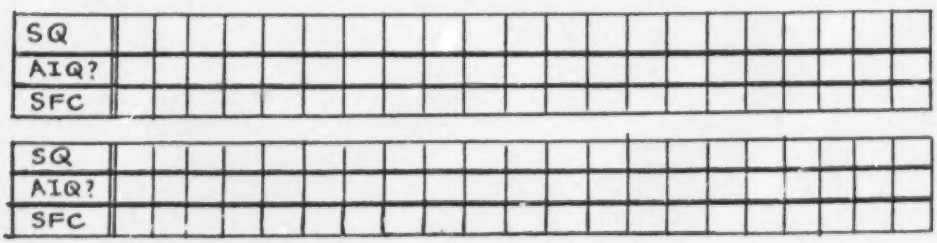


FIGURE 2. Introductory learning sequences for KIACS (Katterns Interaction Analysis Coding System)

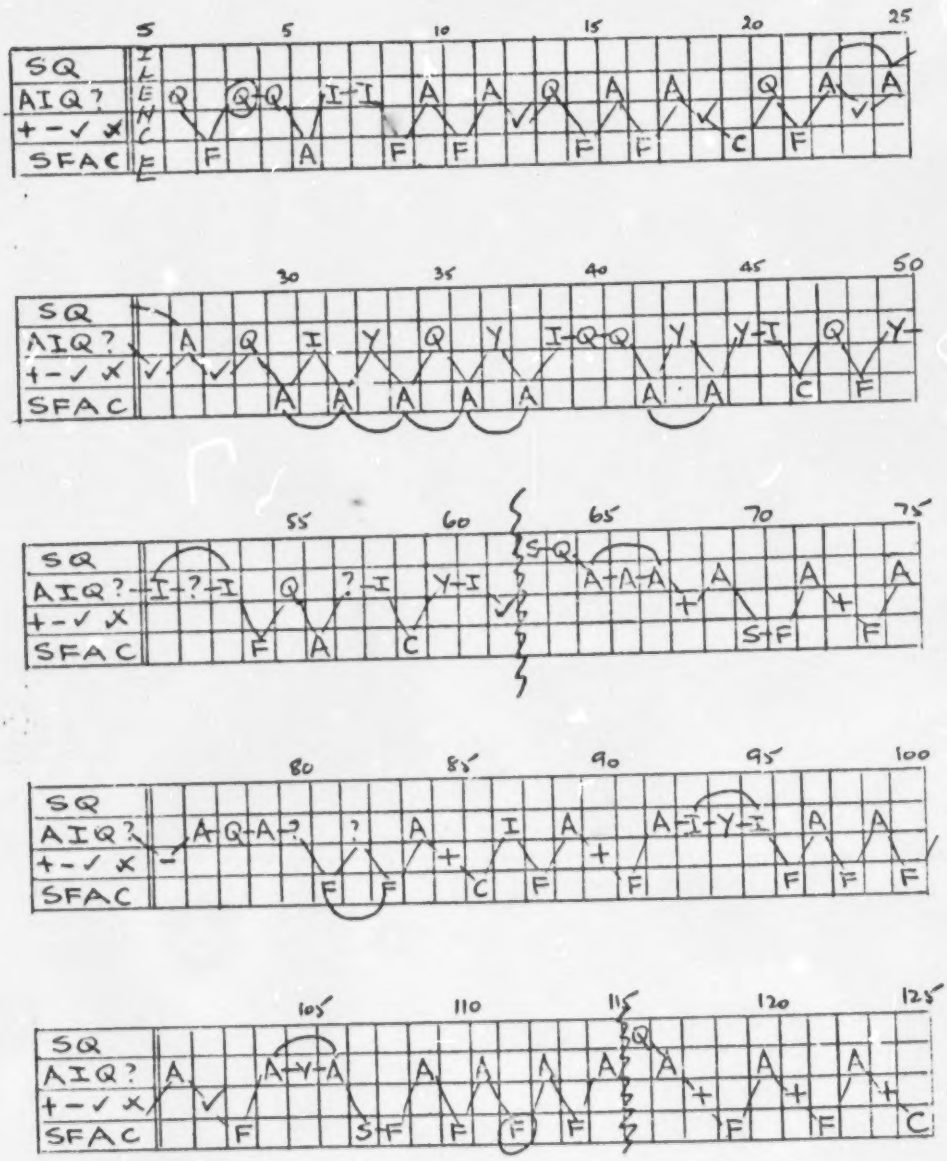


FIGURE 3. Discussion lesson coded with KIACS (Katterns Interaction Analysis Coding System)

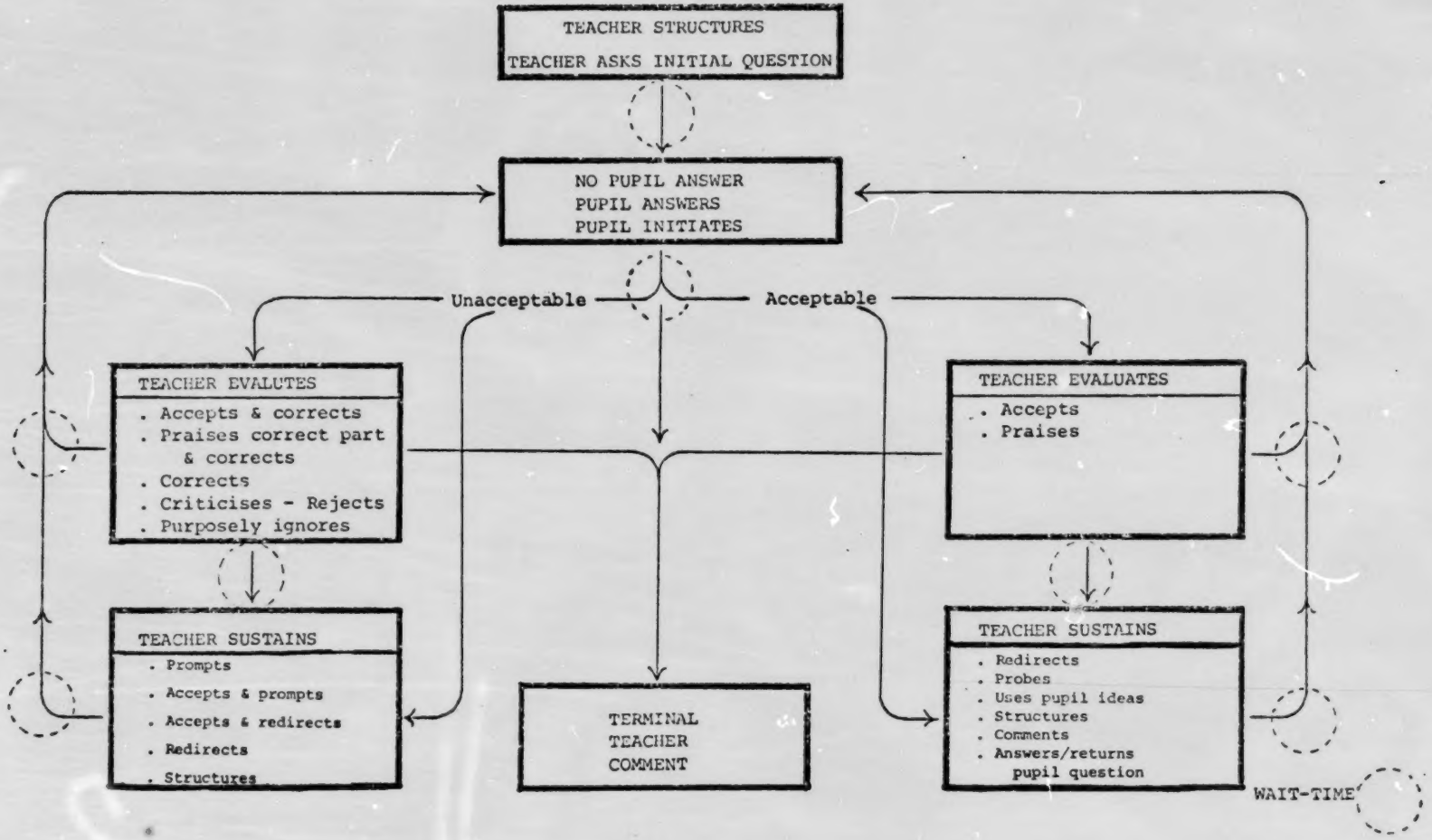
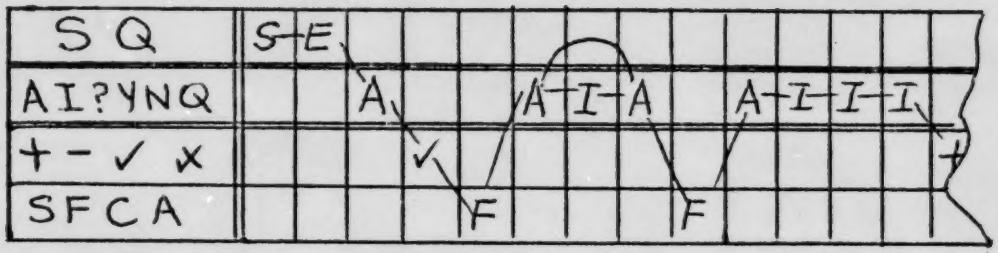
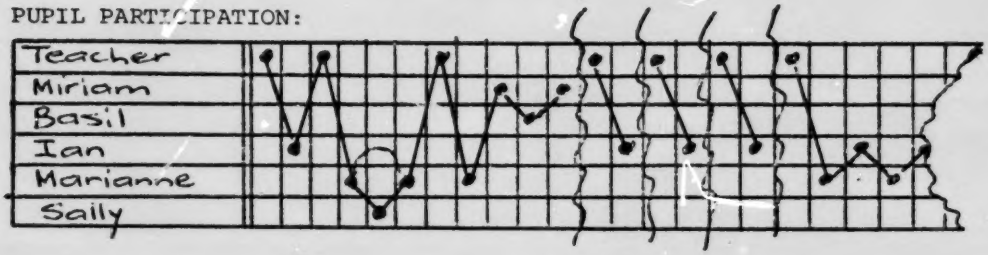


FIGURE 4. Teacher-led discussion : possible verbal move decisions in the discussion episode.

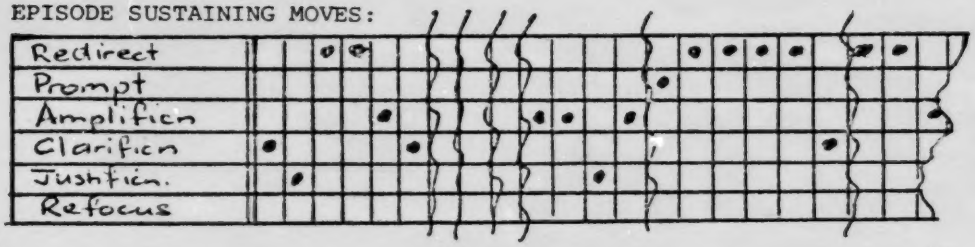
OVERALL DISCUSSION FLOW:



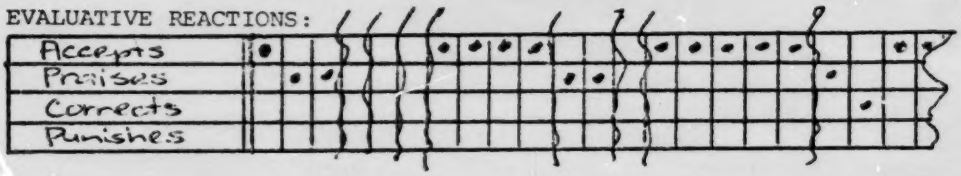
PUPIL PARTICIPATION:



EPISODE SUSTAINING MOVES:



EVALUATIVE REACTIONS:



"AVOIDS":

Complex/confused questions	II
"Spoon-feeding"/leading	
"Yes-No" questions	III
Rhetorical questions	
Answering own question	I
Repeating pupil responses	I

FIGURE 5. Data array for the non-judgmental supervisory conference